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IT IS commonly said that forestry in this country really began about the turn of the century. This is true in the sense that building of a profession of foresters, development of the national forest system, and other actual achievements in forestry have been brought about within the last 40 years. These accomplishments would not, however, have been possible without the pioneer work of a small group of leaders during the previous 15 or 20 years. Viewed from the standpoint of the extent and character of work under way today, the high standing of the foresters responsible for it, and the general support of forestry by the general public, the achievements within the past generation are very impressive and may well be a source of gratification and pride to every forester.

The advance of forestry has not been by regular stages of progress. There have been sharp forward movements interrupted by periods of moderated activity, but always with some net gains. At no time has there been actual recession. The impulse of upward swings of activity has so far come chiefly through the adoption of some federal legislative policy with appropriations for new public undertakings. The very initiation of forest practice on a substantial scale was in building up the national forests and placing them under administration. This called for many men trained in forestry to manage the public properties. The need for men resulted in the establishment of forest schools and laying the foundations of our profession. It was the first big step in forestry. It involved the development of policies of administration of forests, procedures in management, and techniques in field practice.

After the retirement of Theodore Roosevelt and Gifford Pinchot, there followed a period, less dramatic but significant in consolidation of position, public education, training of foresters, advance in research, initiation of cooperative work in fire protection, acquisition of federal forests in the East, and stimula-

tion of state forests. Historians probably will point to the experiences of the war as important in connection with the work of the foresters and lumbermen in France and in war work at home. This resulted in widening of experience and in public appreciation of forestry, and had a bearing on the special activities that followed in a few years.

After the war an effort was made to stimulate private forestry. It fell short in actual practice, but was responsible for the Clarke-McNary Act of 1924 which placed fire protection on a new level and resulted in greatly enlarged activities by the states. This cooperative undertaking, followed soon by the McSweeney-McNary Act for federal work in research, represented a great advance in two important fields of forestry. Again there followed a period of capitalization of previous advances including many new accomplishments in national forest administration.

THE year 1933 marked the beginning of the present era of forestry occasioned by federal undertakings on an unprecedented scale. The expansion of forestry within the past four years was possible because of foundational work previously under way. From time to time during the history of forestry there have been definite advances into new frontiers of application of forestry: national forests, state forests, cooperation in fire protection, development of extension work with farmers, and research. The developmental work in each field, progressing from year to year, was laying foundations for similar movements into the new and less developed areas now being covered in the present special era. Upon these foundations have depended the success of the C. C. C., expansion of acquisition, planting of trees, the new place of forestry in soil erosion and stream control, widened state cooperation, integration of forestry with agriculture, new steps in wild life conservation and recreation, strengthening of forest education, and more effective economic and scientific research.

The young forester now entering the profession perceives these great strides forward and may at times wonder if the field of forestry is not already covered, and that he must take his place in a more or less stabilized undertaking, with work of interest perhaps, but no longer having the adventurous character of pioneering.

THE reader of this article will have perceived that I have said little about private forestry except as implied in cooperative fire protection and extension work with farmers. Here is the

great undeveloped frontier of forestry. More than three-quarters of the productive forests of the country are in private ownership. Some industrial owners, some proprietors of private estates, and considerable number of farmers have taken the first steps in constructive management of their properties. Through federal and state aid, about 63 percent of the forests of the country has some degree of protection from fire. But the proportion of private tracts handled under proper methods of woods practices is very small. Such properties represent notable outposts of private forestry; enterprises by men of foresight, who have faith in the values of well handled forests in meeting their special industrial or other objectives.

The problem of bringing private forests under management on a large scale is much more complex and difficult than in public forestry. Here we are dealing with thousands of individual owners, each with special financial and other objectives in holding land. There is great diversity in size and character of land, condition of stand, and relation to transportation and market. Moreover, most private owners are not yet convinced that the forest practices which we advocate are feasible for them individually. Traditional adherence to old methods and ideas, lack of knowledge, technical or otherwise, inertia, and resentment to public pressure are factors in the slowness of owners to adopt forestry principles in managing their lands. In a great many cases it is a question of financial urge to liquidate commercial timber, the plight of owning forests that have been stripped or badly depleted, or other very real economic problems; obstacles recognized by practical foresters as extremely difficult to overcome.

THERE are many who find themselves so baffled by the complexities of the private forest problem that they advocate the absorption of the major portion of the forest lands of the country in public ownership. I am personally in favor of a large program of acquisition of federal and state forests, along the lines proposed by the U. S. Forest Service. This looks chiefly to public acquisition of lands which clearly are beyond the power of private owners to handle in a way to safeguard public interests inherent in them. Such a program will take a long time for completion, and even then there will remain in private ownership a large proportion of the productive forest land of the country.

We cannot dodge the private forestry problem merely because its present difficulties. On the contrary, we must face

it squarely and immediately both in the interests of the general public and of the industries and communities dependent on forest land resources. The very difficulties of the problem constitute a challenge to foresters and a great opportunity to the young men who are now preparing for forestry as a career.

EVERY serious student of the private forestry problem recognizes that both leadership and cooperation by the public are necessary. This is true from the standpoint of the public interests involved and, too, on account of the character of the undertaking. The public must aid in protection of forests from fire, and from infestations of insects and tree diseases. The public must assist in providing an equitable system of taxation, in conducting research and practical demonstrations of forestry, in furnishing basic information, in furnishing credit under proper conditions, in cooperation in procurement of seed and planting stock at reasonable rates, in leadership in mutual cooperative enterprises for marketing, and in other ways. Steps are well under way in offering such public cooperation.

In the long run, however, the success of private forestry will depend on the efforts of individual owners in their own interests. This is true not only of industrial owners but also of farmers. The public may well give special aid to farmers, in handling their small woodlands, as well as their crop and pasture lands. Beyond a certain point, which further experience in cooperative work will determine, the farmer should learn to handle his lands with minimum aid from the public.

IT IS especially important that industrial owners of timberland recognize the need of employing their own foresters rather than looking only to the public agencies for expert advice and help. It is very desirable that the federal and state agencies be in a position to advise lumber and pulp companies how to proceed in inaugurating forestry, but the actual work should be handled by foresters employed by the companies, as consultants or as regular members of the organization. These concerns need men trained in the actual business features of their own enterprises. Foresters in public employ usually have not had such business experience.

Private forestry, particularly in the South, is now beginning to make some headway. My greatest fear is that owners may rely too much on general advice from public agencies and assume that a few rules of thumb will suffice to enable them to practice forestry. They cannot afford to depend on such pre-

liminary advice. My second fear is that, when such owners do appreciate that they need to employ their own foresters, there will be a lack of properly trained men. I refer to the need of training and experience in a business and not merely in a public undertaking.

This problem is reflected in the work of students in the forest schools. If the whole atmosphere is governed by an outlook for public employment, students are less inclined to interest themselves in those phases of forestry which pertain to economic and industrial problems. There may also be less emphasis on such questions by teachers. If there were opportunities for apprenticeship with private companies, with a chance for ultimate permanent employment, the situation would rapidly change. There would be real competition between public and private agencies for qualified young foresters.

HERE, then, is an undeveloped field of major importance. Forestry in this country will not be achieved until private as well as public forests are under good protection and technical management, all contributing to the economic, industrial and social development of the country. Our present undertakings are already of great magnitude, but from the standpoint of full service, the program is badly out of balance. The time has arrived to crystallize the private forestry movement into effective action on a large scale. An excellent beginning was made for concerted effort in connection with the forestry codes under the N. R. A. Though the N. R. A. was discontinued, it resulted in laying foundations for forestry practice and in the beginnings of actual field undertakings on a considerable number of properties. The forthcoming conference of lumbermen and foresters in Washington in April indicates a determination to carry forward the movement initiated by the N. R. A.

In my opinion we are on the threshhold of one of the most important enterprises ever undertaken in forestry. We shall need many young men of ability, ambition and determination. The opportunity lies before these men to take part in conquering a new frontier in forestry.